

CLAIMS

1. A method for recycling an optical disk made of a plastic substrate sequentially laminated with a recording layer and a reflecting layer by a raw material supplier of the substrate and a disk presser who manufactures the optical disk, and optionally a trader who purchases the optical disk from the disk presser, comprising the steps of:

one selected from steps consisting of (1) procuring raw material for the substrate and (2) manufacturing the raw material by means of a raw material manufacturing device and by the raw material supplier of the substrate;

manufacturing the optical disk by means of an optical disk manufacturing device and by the disk presser by forming the substrate from the raw material for the substrate and laminating the substrate sequentially with the recording layer and the reflecting layer;

recording predetermined information on the optical disk by means of an information recording device and by one selected from the disk presser and the trader having purchased the disk from the presser; and

recovering a pure and lucent plastic substrate without any material constituting the recording layer and the reflecting layer by means of a substrate recovery device and by one having recorded the predetermined information on the disk by abrading a disk fallen into disuse by means of an abrader from the reflecting layer side without supplying water so as to break the material away from the substrate and into powder while collecting the powder by a means for collecting powder.

2. The method as defined in claim 1, further comprising a step of recovering gold from the powder collected by the powder collecting means.

3. The method as defined in claim 1 or 2, further comprising a step of breaking the plastic substrate into pellets.

5 4. A recycling system for recycling an optical disk made of a plastic substrate sequentially laminated with a recording layer and a reflecting layer by a raw material supplier of the substrate and a disk presser who manufactures the optical disk, and optionally a trader who purchases the optical disk from the disk presser, comprising:

10 a raw material manufacturing device for manufacturing the raw material for the substrate by the raw material supplier of the substrate;

an optical disk manufacturing device for manufacturing the optical disk by the disk presser by forming the substrate from the raw material for the substrate and laminating the substrate sequentially with the recording layer
15 and the reflecting layer;

an information recording device for recording predetermined information on the optical disk by one selected from the disk presser and the trader having purchased the disk from the disk presser; and

a recovery device for recovering a pure and lucent plastic substrate
20 without any material constituting the recording layer and the reflecting layer by one having recorded the predetermined information on the disk by abrading a disk fallen into disuse by means of an abrader from the reflecting layer side without supplying water so as to break the material away from the substrate and into powder while collecting the powder by a means for
25 collecting powder.